



How do I prevent lead exposure?

Lead poisoning is 100 percent preventable. Proper ventilation, good housekeeping practices and basic personal hygiene practices will limit or eliminate the risk of lead exposure.

If you are casting at home, take the following precautions.

Establish a casting area:

- Outdoors or, if indoors locate this area away from the kitchen or food handling or storage areas.
- Make sure this area is not carpeted and surfaces are easy to clean. Make your own floor sweeping compound from sawdust, peat, or dry dirt with an oil mixed in to make it clumpy. Dust this compound on the floor to prevent lead dust from becoming airborne.
- Use lots of ventilation that exhausts air up and out. Do not use a portable fan, it will only blow airborne lead dust around the room. Make sure that the air from this area is not being circulated throughout your home through your home heating and air conditioning system.
- Never eat, drink, chew gum or smoke or have these in your casting area because lead dust will settle on them and you will eat or inhale the dust.
- Use rubber gloves and a dust mask with special filters for lead when handling solid lead, bullets and dross. Store dross in a closed container.
- Melt lead below 900F. Lead melts at 621F. Fumes are released at 900F. Lead fumes can be breathed in and also settle on surfaces as lead oxide — the yellowish/brown dust formed when fumes mix with air.

- Do not sweep dry floors. Use a shop-vac with a HEPA filter to vacuum the floor, work surfaces and your clothes. Use this vacuum only in your casting area and **DO NOT** use the house vacuum.
- Wipe down your work areas after casting with lead removal wipes or decontamination cloths specifically made for lead removal.
- Keep children and women of childbearing age clear of this area. Children are more likely to come in contact with lead dust and get it in their mouths.
- Shower and wash hair after smelting or casting. Always wash hands after handling lead.

Hand sanitizers are good for germs but are useless for lead.

Alcohol-based hand sanitizers do not remove lead from hands. While washing with soap and water is often a sufficient means of removing lead residue, there are more efficient cleaning products that can almost completely eliminate lead content from your skin. Decontamination towels, for example, remove 98 percent of lead residue from skin. In addition, there is hand wipe technology available that will indicate whether your handwashing method is effective.

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Lead Safety »» For Shooters



Illinois Department of Public Health
Division of Epidemiologic Studies
Adult Blood Lead Registry

As a shooter, how am I exposed to lead?

Do you work at or use an indoor firing range?

Do you cast bullets?

Do you reload your own ammunition?



If you answered yes, then you have probably been exposed to lead and you may be putting yourself and your family at risk for lead poisoning.

How shooters are exposed to lead

Most ammunition contains lead within the bullet and the primer. Lead is released into the air when the gun is fired and forms small particles that you can breathe. Lead particles also are formed as the bullet spirals through the barrel. These particles can get into your body when you breathe or swallow, such as when you eat, drink or smoke. Lead is soft and can be transferred to your skin as you handle ammunition. The following activities expose you to the toxic heavy metal lead:

- Firearm target shooting
- Firearm cleaning
- Ammunition handling and reloading
- Casting bullets and shot

For more information about indoor firing ranges, read the Department's [Lead Safety for Indoor Firing Ranges](#) brochure.

Know the lead content of your ammo

Primers that are lead-free are available, but the majority still contain lead. New and spent primers are a potential source of lead contamination. The yellow dust found in the priming station is a toxic lead compound. Do not use compressed air to blow off the dust. Clean with a disposable towel, dampened with cleaner.

Tumble cleaning brass cases is a common practice that also exposes you to lead. The inside of the case contains lead compounds that are removed by the cleaning media and can become airborne when sifting during brass separation. When tumble cleaning:

- replace cleaning media when it starts to become gray;
- don't sift brass through an open colander;
- use a covered rotating basket style separator;
- always keep the lid closed while the basket is spinning; and
- allow the dust to settle in the basket before removing the lid.

How do I know if I have lead in my body?

Have your blood tested

You can have lead poisoning and not have any symptoms. Contact your health care provider or local health department to get your blood tested. Your doctor can take a blood sample and test for lead. These tests give results in micrograms per deciliter of blood. They are a simple and inexpensive way for individuals to know if the precautions they are taking to keep their lead exposure down are working.



A little lead never hurt anyone — or does it?

How lead exposure harms you

Absorption of lead into your body will affect your health. Lead is stored in the blood, liver, kidney and bones. Frequent exposure to lead, particularly at high levels, can harm the nervous, digestive and reproductive systems, the brain and kidneys, and can interfere with the body's ability to make blood. When the nervous system is affected by lead exposure, you might become irritable, exhibit aggressive behavior, be depressed, have a loss of sensation in your fingers and face, or weakness in the fingers, wrists and ankles. You might also experience headaches, lose sexual function and become impotent. Other symptoms of exposure to high lead levels may include loss of appetite, joint pain, and changes in sleep patterns.

Lead exposure affects men causing reduced sexual function and impotence if lead levels reach high enough concentrations. Lead also can alter the structure of sperm cells potentially causing birth defects.

Pregnant women are especially vulnerable to lead exposure due to metabolic changes caused by the pregnancy. Lead passes through the placenta to the fetus potentially causing miscarriages and birth defects.

Adults absorb about 20 percent of the lead they ingest; children absorb about 70 percent of the lead they ingest. Exposing a child to lead may result in slow learning, slow growth, hearing loss and behavioral problems.

